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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,088	05/23/2001	Pradeep K. Kathail	2386.2013-000 (CIS-3217)	1808
21005	7590	03/08/2005	EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			SAM, PHIRIN	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,088

Applicant(s)

KATHAIL ET AL.

Examiner

Phirin Sam

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9, 12-17, 19-22, 25-27, 30-35, 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 10, 11, 18, 23, 24, 28, 29 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-5.

PHIRIN SAM
PRIMARY EXAMINER

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because some of the blocks in the drawings do not provide labels and figures 1-5 believing to be admitted arts. Therefore, these figures (1-5) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 7-9, 12-17, 19-22, 25-27, 30-35, 37, and 38 are rejected under 35

U.S.C. 102(e) as being anticipated by US Patent 6,697,872 hereinafter referred as "Moberg".

Moberg discloses the invention (**claim 1**) as claimed including a method for dynamically building a packed processing chain, comprising:

- (1) providing a plurality of packet processing elements (see Fig. 1, elements 112, 114, 116, and 118, col. 6, lines 19-32, 61-67);
- (2) for each of a first subset of elements, providing operations indications (see Fig. 6, col. 8, lines 27-33);
- (3) for each of a second subset of elements, providing expectations indications (see Fig. 6, col. 8, lines 33-40);
- (4) building the chain by combining elements to form the chain according to a configuration requirement, a first element from the first subset executing in the chain prior to a second element from the second subset (see Figs. 1 and 6, col. 8, lines 6-22), wherein the operations indications of the first element satisfy the expectations indications of the second element (see Fig. 6, col. 6, lines 43-50, and col. 8, lines 31-33).

Regarding claims 2 and 20, Moberg discloses an expectation is that a predetermined field holds a **valid value** (see Fig. 5, col. 7, lines 29-43).

Regarding claims 3 and 21, Moberg discloses the predetermined field holds a pointer to a datagram start (see Fig. 5, col. 7, lines 29-43).

Regarding claims 4 and 22, Moberg discloses the predetermined field holds a pointer to a network layer start (see Fig. 5, col. 7, lines 34-37).

Regarding claim 19, Moberg discloses a packet routing system, comprising:

- (a) a plurality of packet processing elements, where each element provides indications of its expectations and its operations (see Figs. 1 and 6, elements 112, 114, 116, and 118, col. 5, lines 60-67, and col. 6, lines 1-42);
- (b) a chain builder which builds a chain according to a configuration requirement by combining a subset of elements to form the chain, such that the operations indications of an element in the chain satisfy the expectations indications of a following element (see Fig. 6, col. 6, lines 43-60, col. 7, lines 60-67, and col. 8, lines 1-33).

Regarding claims 7, 8, 25, and 26, Moberg discloses the chain performs at least one encapsulation function and at least one decapsulation function (see Fig. 6, col. 8, lines 2-5).

Regarding claims 9, 12, 13, 27, 30, and 31, Moberg discloses the chain performs at least one service function (see Fig. 4, element 72 and 74, col. 7, lines 26-27).

Regarding claims 14 and 32, Moberg discloses an expectation is that a predetermined encapsulation/de-capsulation has been performed (see Fig. 6, col. 7, lines 64-67, and col. 8, lines 1-5).

Regarding claims 15, 16, 33, and 34, Moberg discloses an expectation is that a predetermined service function has been performed (see Fig. 6, col. 8, lines 12-22).

Regarding claims 17 and 35, Moberg discloses an expectation is that a predetermined service function has not been performed (see Fig. 6, col. 8, lines 27-31).

Regarding claims 37 and 38, Moberg discloses a packet routing system, comprising:

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- (a) a plurality of packet processing means (see Fig. 1, elements 112, 114, 116, and 118, col. 6, lines 19-32, 61-67).
- (b) expectations indication means for at least one packet processing means (see Fig. 6, col. 8, lines 27-30). Where col. 8, lines 27-30 discloses that the identify code specifies (expect or indicate) which functions to be performed on the processors 24a and 24b.
- (c) operations indication means for at least one packet processing means (see Fig. 6, col. 8, lines 31-38);
- (d) means for building a chain comprising at least one of said packet processing means by combining a subset of said plurality of packet processing means (see Figs. 1 and 6, elements 112, 114, 116, and 118, col. 6, lines 43-60, col. 7, lines 60-67, and col. 8, lines 1-22), according to a configuration requirement, such that the operations of a first element in the chain satisfy the expectations of a second element's in the chain (see Fig. 6, col. 6, lines 43-46, and col. 8, lines 31-33).

Allowable Subject Matter

4. Claims 5, 6, 10, 11, 18, 23, 24, 28, 29, and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) Moberg et al (U.S. Patent 6,578,084) discloses packet processing using encapsulation and de-encapsulation chains.

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(2) Zheng et al (U.S. Patent 6,611,522) discloses QoS facility in a device for performing IP forwarding and ATM switching.

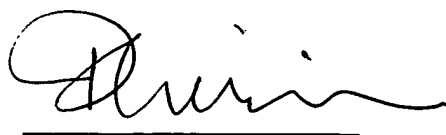
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on Mon-Fri, 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on (571) 272 - 3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

Date: March 3, 2005

A handwritten signature in black ink, appearing to read 'Phirin', is written over a horizontal line.

**PHIRIN SAM
PRIMARY EXAMINER**